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ABSTRACT

The Alliance for Career and Vocational Education is a consortium of school districts that was formed by the National Center for Research in Vocational Education so participating districts could pool resources and address common needs in career and vocational education. Through the Alliance, career exploration, awareness, and planning materials were developed for use at the elementary, junior high, and high school levels. Some of these materials have been adapted by the Alliance for use with educable mentally handicapped and bilingual students. A study was conducted in the Milwaukee (Wisconsin) Public School System to determine the effect of the use of these materials with approximately 560 exceptional students (mentally handicapped, emotionally impaired, and learning disabled) in junior high/middle schools. Based on in-depth interviews with twenty individuals representing administrators, teachers, and exceptional education students, nine primary effects on involvement in the Alliance and use of the materials were identified. Also, administrators at the Milwaukee site reported the Alliance materials to be a valuable core career education package, and the special edition for mentally handicapped students was valuable as a core exceptional education career education program. The investigation concluded that the use of Alliance materials served as a springboard for more extensive career education programs, helped initiate a career education program for exceptional education students, enhanced credibility of the programs and ability to secure local funds, increased the knowledge of career options and related skills for both teachers and students, and stimulated district and classroom innovation. (KC)

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CAN RESEARCH HELP
MENTALLY HANDICAPPED LEARNERS
EXPLORE CAREERS?

by

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- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Providing information for national planning and policy
- Installing educational programs and products
- Operating information systems and services
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SUMMARY

The Alliance for Career and Vocational Education is a consortium of school districts that was formed by the National Center for Research in Vocational Education during the 1973-74 school year so participating districts could pool resources to address common needs in career and vocational education. Through the Alliance, career exploration, awareness, and planning materials were developed for use at the elementary, junior high, and high school levels. Some of these materials have been adapted by the Alliance for use with educable mentally handicapped and bilingual students (Resource Editions). Recently, the Alliance has also started developing competency-based vocational education materials.

National Distribution

A total of twelve school districts in ten states have held Alliance membership during its seven-year history. Since 1973-74, Alliance-developed career/vocational education materials have been used by 30,770 students involving 893 teachers/counselors in 843 classrooms. Since 1978-79, the "Resource Edition" materials for the educable mentally handicapped have been used in 149 classrooms by 149 teachers with 2,720 students.

Use in One Setting

The Milwaukee (Wisconsin) Public School System has been one of the school districts that has had extensive Alliance involvement. This site was selected for an intensive examination of the use and effects of the Alliance in this setting in November 1979. Milwaukee is a large urban school district in a heavily industrialized setting which employs 6,000 teachers and administrators for a student population of 91,943. The Milwaukee District began its Alliance participation in 1974 during the initial formation of the consortium and has invested approximately \$175,000 in contracts with the Alliance for materials and services over a span of seven years. It has, during that time, been involved in pilot and field testing of Alliance materials and has used these materials as a springboard for the development of an extensive systemwide career education program. The Alliance, in conjunction with Milwaukee schools, is currently developing a competency-based vocational education home economics curriculum.

Recently this program has been broadened to encompass some of the district's exceptional students (mentally handicapped, emotionally impaired, and learning disabled). The Resource Edition programs have been used with approximately 500 of these students. Milwaukee's exceptional education program is a strong one, serving 5,700 students with 670 exceptional education teachers. Although Milwaukee had a systemwide career education program, the field testing of the Alliance Resource Edition career education programs for the educable mentally handicapped during the 1978-79 school year constituted the formal beginnings of an Exceptional Education Career Education program. During 1978-79, the materials were used in eight junior high/middle schools in eight exceptional education classrooms. During 1979-80, uses of the Alliance Resource Edition programs were expanded to include all of the districts' eighteen junior high/middle schools. Also during 1979-80, Milwaukee's Exceptional Education program was further expanded by the opening of a vocational education center which currently serves only exceptional education junior high and high school students.

Effects

Based on in-depth interviews with twenty individuals representing administrators, teachers, and exceptional education students, nine primary effects of involvement in the Alliance and use of the materials were identified. Alliance participation had the following four effects on the school district: (1) provided a core program which assisted in extending the career education program systemwide; (2) facilitated financial support for career education from the school district including the creation of one permanent position; (3) added credibility to the career education program through providing materials from a university; and (4) helped initiate a career education program for exceptional education students for the first time.

Alliance participation had the following three effects on teachers and administrators: (1) increased exceptional education teachers' awareness, knowledge, and commitment to career education; (2) stimulated classroom teachers to develop their own innovations modeled after the Alliance concepts and materials; and (3) introduced administrators to pilot/field testing procedures used in developing Alliance career education materials.

Alliance participation had the following two student effects: (1) gave exceptional education students a reality-based awareness of career possibilities in the world of work, and (2) increased exceptional education students' awareness of the work habits/employability skills needed to maintain a job.

Appraisal

Administrators at the Milwaukee site reported the Alliance materials to be a valuable core career education program "package." The Resource Edition materials were similarly deemed valuable as a core exceptional education career education program. As a positive feature, Milwaukee users further cited the high quality, systematic development, and broad range of career education objectives of the materials. Staff indicated that the Resource Editions answered a pressing curriculum need and provided a positive, reality-based learning experience to students. Users cited as negatives the poor quality of the video materials, various organizational weaknesses of the materials, lack of continuity in the National Center's Alliance program staff, and monetary constraints of reproducing the materials on a large scale. Some teachers felt the careers introduced through the materials required higher skill levels than their lower-functioning students could expect to attain. The 2.5 reading level was reportedly too high for many students.

Conclusions

Investigation of use of Alliance career education materials in a single exemplary site, Milwaukee Public Schools, gives evidence that the career education materials offered a core package that served as a springboard for a more extensive program. The Resource Editions helped initiate a career education program for exceptional education students. Use of the materials reportedly enhanced credibility of the programs and assisted in securing local funds. Based on the Milwaukee experience, both teachers and students gained awareness of career options and related work skills. The Milwaukee site also provided evidence that the Alliance materials stimulated district and classroom innovation.

CHAPTER I

AN APPROACH TO EVALUATING THE IMPACT OF R&D

The Alliance for Career and Vocational Education is a consortium of local school districts from across the United States and the National Center for Research in Vocational Education at The Ohio State University. This Alliance was formed during the 1973-74 school year to provide participating districts with a vehicle for pooling resources to address common needs in career and vocational education.

A board of members, which includes representatives from member school districts and the National Center, jointly determines specific areas of concern and formats program directions. Each school district contracts with the National Center on a yearly basis to carry out a specified scope of work. Every school district receives the products developed with other member districts; thus Alliance membership affords access to thoroughly tested, comprehensive programs at minimum expense.

During the seven years of the Alliance's existence, four career education programs have been conceptualized, developed, and implemented. These are Career Awareness in Language Arts (K-6), Career Exploration (7-9), Career Planning System (a component for grades 8-9 and a component for grades 10-12), and Career Preparation in Mathematics (grades 9-12).

The Alliance is currently expanding its focus to include the development of competency-based vocational education curriculum materials. Since this aspect is in the development phase, this evaluation study will focus only on the career education Alliance components. Specifically, the primary focus will be on those Alliance career education materials which have been adapted for use with educable mentally handicapped and bilingual students (Resource Editions).^{*} Adaptations included lowering the reading level of the materials to a 2.5 grade level, addition of more specific directions, inclusion of more materials on basic skills, reordering of some materials, and expansion of context clues. The two programs included in the Resource Editions are discussed below:

Career Exploration — this program, comprised of twelve curriculum units, introduces students to various elements of the world of work and then encourages the student to examine personal traits and preferences which would influence a good career choice. Tentative career choices can be determined and plans for more in-depth exploration are formulated. Careers are presented in twelve clusters: Government, Recreation and Entertainment, Manufacturing, Trade and Finance, Agriculture, Personnel Services, Construction, Education, Product Services, Health and Welfare, Arts and Humanities, and Communications.

^{*}Alliance developers use the term "Resource Editions" to reference the adapted career education programs. The case study site (Milwaukee Public Schools) used only those materials adapted for the educable mentally handicapped. Therefore, in this report the term "Resource Editions" will henceforth refer to those programs adapted for the educable mentally handicapped.

Career information simulations have been developed for each career cluster to allow students to experience and explore various work roles within broad career areas. Completion of the simulations requires about fifteen instructional hours. Four of the simulations have been adapted for use in the Resource Editions.

Career Planning System — this individualized program includes thirteen curriculum units designed to help junior high students plan a career-oriented high school program. The materials guide students toward identifying their personal interests and then direct the student toward examination of occupational groups which relate to these personal interests. Further, students may identify high school courses and extracurricular activities relating to their interests which will help develop related skills.

The Alliance Resource Edition programs have been pilot tested and revised and then field tested in nine school districts with mentally handicapped students, emotionally disturbed students, and learning disabled students.

Purpose of the Study

The purpose of this study is (1) to document national participation in the Alliance, (2) to assess the impact of the Resource Edition of the Alliance career education materials on handicapped students in a single setting, and (3) to examine the impact of Alliance membership on one local school district. Impact is perceived as a multidimensional concept that encompasses distribution, use, effects, and appraisal of the materials. The following study questions are organized around these four dimensions.

Distribution

- What has been the distribution of Alliance material to member school districts across the nation?
- What has been the distribution of the Alliance Resource Edition to member school districts?

Use

- How were materials, particularly Resource Editions, used in one exemplary setting?

Effects

- How has involvement in the Alliance and use of the resource material effected change in a local school district?
- How has use of Alliance resource materials effected changes in participating administrators and teachers?
- How has use of Alliance resource materials effected changes in participating students?

Appraisal

- What are the problems and weaknesses of the Alliance resource materials?
- What are the strengths and benefits of Alliance resource materials?
- What can be learned from involvement in the Alliance in a single setting that may be applied in other settings?
- What can be learned from a single setting about the key features in a successful consortium arrangement between an R&D organization and local school districts?

Naturalistic Case Study Methodology

The primary technique used to collect data about the use and effects of Alliance programs was a case study methodology using naturalistic inquiry techniques. The case study was conducted in a single setting considered to be a successful user of the Alliance programs. Open-ended, flexible measuring devices were used rather than prestructured instruments. The primary data collection tool was in-depth, open-ended personal interviews supplemented by observation and review of records.

Supplementary Data

Prior to conducting the Milwaukee site visit, the National Center Alliance project director and staff provided the evaluation team with a general overview of Alliance operations, historic Alliance membership, and specific data on the Milwaukee district's Alliance involvement. Alliance program distribution data was also obtained from the Alliance project director and from Alliance records. Review of two Alliance-prepared documents, an evaluation study and a 1979-80 proposal, provided further background information, as did review of the Resource Editions of the Career Planning System and the Career Exploration program.

Case Study Site

Milwaukee Public School District in Milwaukee, Wisconsin was chosen as an exemplary site. The Milwaukee District is one of the school districts that has had extensive Alliance involvement. The Milwaukee District began its participation in 1974 during the initial formation of the consortium. It has subsequently been involved in pilot and field testing of Alliance materials and has used these materials as a springboard for the development of an extensive systemwide career education program. This program has now been broadened to encompass certain of the district's exceptional education students. This student group in Milwaukee included the educable mentally handicapped, learning disabled, and the emotionally disturbed. The Milwaukee Exceptional Education Program also includes the autistic, the deaf/hard of hearing, the physically handicapped, and various support services. The Alliance materials, however, were used only with the formerly mentioned groups.

The elements considered important in selecting Milwaukee as a successful site were —

1. past involvement in the Alliance;
2. involvement in developing and using adapted Alliance materials;
3. commitment of the school district to the Alliance and to career education for the mentally handicapped.

Site Visit Team

A team of two evaluators from the National Center conducted the on-site visit. The site visit team included two members of the National Center Evaluation Team: Dr. William Hull, a former vocational teacher and senior research specialist; and Jean Anderson, a former special needs teacher

* Because "Exceptional Education" is the term used by the Milwaukee School District, it will be used throughout this report when discussing the Milwaukee program.

and educational evaluator. Both team members were familiar with the Alliance career education materials and had conducted preliminary interviews with the key informant at the Milwaukee site and with National Center product developers.

Site Visit Agenda

An interview with the key informant (director of Exceptional Education Career Education Programs) provided an initial overview of Milwaukee's career education program for the mentally handicapped. A guided tour of the district's new vocational school (presently used only by special needs students) and brief interviews with various center staff members augmented the information provided by the key informant. Personal interviews were also conducted with the district director of career education and a teacher of the mentally handicapped. Group interviews with teachers and students having extensive involvement with the Alliance programs provided the pith of the information regarding classroom impact.

A total of twenty individuals were interviewed with two being administrators, twelve being teachers or counselors as well as four students. Although the student group is not large, a two-and-one-half-hour in-depth group interview was conducted with these students. The students had severe mental disabilities and had difficulty organizing and expressing their thoughts. The students' current exceptional education teachers, as well as the exceptional education teachers who had worked with the group during the previous three years, were present during the interview to assist in soliciting student input. The result was an in-depth look at several students who had intensive involvement with the Alliance Resource Edition programs.

Limitations and Weaknesses

It was necessary, due to constraints on funds and staff time, to choose between an in-depth study of one site and a more cursory study of several sites. The evaluation team chose to conduct an in-depth impact study at a single site.

It is acknowledged that because this impact study focuses on only one exemplary site, there are inherent limitations to making generalizations from the impact data. Findings are specific to the Milwaukee site.

CHAPTER II

DISTRIBUTION OF ALLIANCE MATERIALS

Distribution of Alliance materials is limited to the member school districts. Distribution data were obtained from National Center Alliance records. These records indicate an initial Alliance membership in 1973-74 of six school districts with a total of twelve districts from ten states being involved over the seven-year span of Alliance operations. Annual membership costs to the local district have ranged from \$20,000 to the current \$27,500 fee. A \$300,000 grant from the Commonwealth of Massachusetts provided funds for a joint curriculum development effort by the Boston Public Schools and the National Center during the 1976-77 and 1977-78 school years. In addition, a United States Office of Education grant of \$95,000 to the National Center was passed on to the Alliance members during 1978-79. An overview of Alliance membership is presented in table 1.

Distribution of Alliance Career Education/Vocational Education Materials

From the school year 1973-74 to the current school year of 1979-80, 30,770 students have used Alliance-developed career/vocational education materials. In addition, 893 teachers and counselors in 843 classrooms have been involved with the various Alliance programs. A breakdown by district of student involvement in the various programs since 1973 is displayed in table 2.

Distribution of Alliance Career Education Materials for the Mentally Handicapped

The adaptations of the Career Exploration and Career Planning Systems for use with special needs students were made by the National Center in conjunction with the Boston Public School District, supported by a \$300,000 grant from the Commonwealth of Massachusetts. The resource materials were then field tested in nine Alliance member districts. A total of 2,720 students have used the resource materials in 149 classrooms with 149 teachers. A breakdown of teacher/counselor, classrooms, and student involvement is presented in table 3 by participating districts.

Summary

During a seven-year span beginning with the 1973-74 school year, twelve school districts across the United States have held membership in the Alliance for Career and Vocational Education. As a result of the twelve member districts' Alliance involvement, 30,770 students have participated in cooperatively developed career/vocational education programs. Among those students participating in the career education programs were 2,720 mentally handicapped students. Involvement of these students resulted initially from the pilot field testing of specially adapted career education materials (Resource Editions) intended to provide a core career education program for the mentally handicapped.

Table 1
MEMBERSHIP IN THE ALLIANCE BY YEAR

	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Salinas, CA	X	X	X	X	X	X	
Philadelphia, PA	X	X	X	X	X	X	X
Madison, WI	X	X	X	X	X	X	
Milwaukee, WI	X	X	X	X	X	X	X
Charleston, SC	X	X	X	X		X	
Flint, MI	X	X	X				
Boston, MA				X	X		
New York, NY						X	X*
Montgomery Co., MD						X	X
Detroit, MI						X	
Tucson, AZ						X	
Wilmar Hutchens, TX							X

* Pending; contract currently being written

TABLE 2
STUDENT INVOLVEMENT IN THE ALLIANCE: 1973-1980

Districts	Number of Students				
	Career Education Materials (Since 1973)	Bilingual Adapted Materials (Since 1976)	Special Education Adapted Materials (Since 1976)	Vocational Education Materials (Since 1979)	Total Students by District
Salinas, CA	3,060	120	80		3,260
Philadelphia, PA	3,060	120	740	120	4,040
Madison, WI	3,060				3,060
Milwaukee, WI	3,480	120	560	120	4,280
Charleston, SC	3,420		80		3,500
Flint, MI	1,080				1,080
Boston, MA	5,540	600	600		7,740
New York, NY	360	120	80	120	680
Montgomery Co., MD	1,110	120	420		1,650
Detroit, MI	360	120	80		560
Tuscon, AZ	360	120	80		560
Wilmar Hutchens, TX	360				360
TOTAL STUDENTS BY MATERIAL	26,250	1,440	2,720	360	30,770

TABLE 3
USE OF THE ALLIANCE CAREER EDUCATION
RESOURCE EDITION PROGRAMS
FOR THE MENTALLY HANDICAPPED
1976-1980

Districts	Teacher/Counselors	Classrooms	Students
Salinas, CA	4	4	80
Philadelphia, PA	37	37	740
Milwaukee, WI	28	28	560
Charleston, SC	4	4	80
Boston, MA	40	40	600
New York, NY	4	4	80
Montgomery Co., MD	24	24	420
Detroit, MI	4	4	80
Tuscon, AZ	4	4	80
TOTAL	149	149	2,720

CHAPTER III

USE IN A SINGLE SETTING

Setting

Milwaukee, Wisconsin is situated on the shore of Lake Michigan. Many of Milwaukee's 613,190 residents live in defined racial/ethnic communities within the city. The strong German and Eastern European influence is evidenced in the city's architecture and the array of fine ethnic restaurants. No less striking is the cleanliness and orderliness of this heavily industrialized city. Nor can the strong work ethic of the people go undetected. Although some of the established industries have moved to warmer climates or experienced financial problems, Milwaukee's core population and staple industries are the embodiment of stability, order, and civic pride.

The Milwaukee School District serves a student population of 91,943. It employs 6,000 teachers and administrators. The district maintains 112 elementary schools and eighteen junior high, middle, and high schools. The district has approximately 670 exceptional education classroom teachers for 5,700 exceptional education students. The Milwaukee School District has been a participating member of the Alliance since 1974 and has invested approximately \$175,000 in contracts with the Alliance for services and materials. The Resource Editions of two Alliance career planning programs were used in eighteen junior high/middle school exceptional education classrooms in 1980. Although the Resource Edition programs were initially developed for use with the educable mentally handicapped, the Milwaukee district also successfully used the programs with emotionally disturbed and language disabled students.

The climate for development of an Exceptional Education Career Education program in Milwaukee, Wisconsin, was very good. Wisconsin has strong exceptional education legislation. Public Law 941-32 is built on Wisconsin's state law 115. In Milwaukee, an extremely vocal and visible exceptional education task force made up of parents and various agency representatives are influential in securing exceptional education funds and programs. Further, the strong "work ethic" in Milwaukee fosters a special interest in helping exceptional education students become productive in the world of work. The Social Security Disabled Income (SSI) allowance which provides benefits at age eighteen to persons with an IQ below seventy was reported by exceptional education staff members to frequently be a disincentive to mentally handicapped students seeking employment. The Exceptional Education Career Education program is intended to combat these effects by giving students job skills plus aid and encouragement in seeking jobs. Milwaukee allows students to stay in the exceptional education program until age twenty-one if they are not employable at age eighteen. Heavy industry provides much of Milwaukee's job market, therefore most exceptional education students will need job skills provided through vocational education classrooms. Also, heavy industry provides an array of jobs within the range of the exceptional education students' abilities. Clearly all of the aforementioned factors show the Milwaukee School District to be a dynamic setting for developing career and vocational education programs for exceptional students.

Implementation

Alliance career education programs have been used in Milwaukee since the inception of the district's career education program in 1973-74. Milwaukee has participated in the Alliance each school year since 1973-74. Most recently, the Milwaukee School District field tested the Resource Editions of two Alliance career education programs during the school year 1978-79. The Resource Editions were used in eight junior high/middle school exceptional education classrooms which were paired with eight other exceptional education classrooms. The latter was to be used as a control group for later comparisons of career education skills. Comparisons at the close of 1978-79 between the classrooms using the Resource Editions and the control classrooms revealed a stronger awareness and interest in career education among the Resource Edition users for both teachers and students. A decision was made to invest \$6,000 of the district's funds to purchase Resource Editions for all eighteen junior high/middle school exceptional education classrooms. The materials were to be reproduced by the National Center.

Reasons for Adopting the Materials

The Alliance career education programs have proved to be a useful vehicle for establishing and expanding Milwaukee's current systemwide career education program. The Alliance Resource Editions were then a natural starting point for an exceptional education career education program. The materials were comprehensive and "ready to use." The larger plan for the district's Exceptional Education Career Education Program includes moving down from the junior high/middle school level to institute career awareness activities among elementary school children. The Exceptional Education Program coordinator feels that "the younger children can be prepared for future careers the better." Further, the program plans to move up to senior high schools so that students can participate in vocational education activities related to their stated career goals.

Included among the Alliance career education programs is the Career Awareness in Language Arts program for students K-6 which Milwaukee plans to adopt for the elementary age exceptional needs students. In addition, a component of Resource Edition Career Planning Support System may be used with senior high school students. Plus, the Alliance is currently working with Milwaukee to develop high school level competency-based vocational education programs. In essence, Alliance membership offers a core of career education materials from kindergarten to high school graduation. The availability of these materials seems consistent with Milwaukee's long-range exceptional education career education plans.

Program Operations

In 1978-79, the Resource Edition materials were field tested in Milwaukee with four different student groups. Included among these groups were two classrooms of higher functioning mentally handicapped students who are mainstreamed for part of the school day, two self-contained classes of lower functioning mentally handicapped students, two self-contained classes of learning disabled students, and one self-contained class of emotionally disturbed students. The learning disabled and emotionally disturbed students had handicaps severe enough to markedly impede their social and academic functioning levels. Teachers and students interviewed reported even the 2.5 reading level of the Resource Edition materials to be too high. A sample of the learning disabled students who were interviewed in-depth exhibited a variety of learning and adjustment difficulties. All of the students reported difficulty functioning in the more hostile environment of the mainstreamed classroom. Students manifested fragmented views of reality. They seemed to have difficulty relating to their

future entry into the world of work. There was a general anxiety associated with meeting the academic demands of the traditional school curriculum. For some, the introduction of career education and planning concerns represented new demands and anxieties. All of the students were intent on learning to express themselves. One student said, "I want to be able to talk to people. I want people to understand me." Another said, "It is important to me to learn how to read and understand everything because I have to concentrate on everything." "It's hard enough to just do what I have here. I want to learn what I have now." To varying degrees, most of the students interviewed were struggling to find a comfortable place in their world.

Use of Materials

The Resource Edition materials field tested in Milwaukee include the Career Planning Support System (component for grades 8-9) and the Career Exploration Simulations, which has the following clusters:

- Conventions — personal service cluster
A hotel staff prepares for a convention
- Shirttails — trade and finance cluster
Operation of independent retail stores
- Wilawala Lake Community — construction cluster
Planning and design of a housing development

Specifically, four exceptional education teachers used the Career Planning Support System while four classrooms used the Career Exploration Simulations.

Teachers using the Career Planning Support System with the higher functioning educable mentally handicapped spent ninety minutes of class time daily for the entire school year on this activity. Those using the materials with the lower functioning students used the materials for one semester, one forty-minute period a day. The Career Exploration Simulations were used by most participating teachers for approximately four hours per day for a period of four to six weeks.

A number of the teachers, particularly those using Career Exploration Simulations, reported expanding the activities presented in the Alliance Resource Editions in innovative ways. The innovations ranged from using commercially or internally prepared measurement units before presenting an Alliance unit, to following up the construction unit with the building of a model house to scale, to coordinating a unit with an industrial arts class, and making concept flash cards to augment the vocabulary study. One teacher reported translating every unit into a lecture format for her non-reading students. Another reportedly invited guest speakers working in jobs related to the units to address the class. Several teachers indicated that they incorporated career awareness concepts into teaching of basic skills.

In 1979-80, the Resource Editions are being used in the framework of an expanded exceptional education career education program. Some exceptional education activities are being consolidated into a new location, Lincoln School, which is being renovated to be a vocational school. Special emphasis is being given to special needs students. This facility is able to accommodate 150 students at one time; it is planned that 500 students will use the facility yearly. At this location students can obtain a comprehensive evaluation of their work skills. A four-year plan is formulated for all exceptional students by a team of teachers, counselors, and other relevant persons. Following the general evaluation, the student may (1) return to the home school and enter exploratory experiences in

exceptional education classes, (2) attend classes at the new vocational center, or (3) be mainstreamed into general or vocational education classes. In practice, a student is likely to experience each of those options at some point in the school career. A fourth option, cooperative education experience, is also open to students on a half-day basis for one semester. Both nonpaid and paid experiences are available. One of the favorite work stations is Milwaukee's St. Luke's Hospital. Most students are reportedly not ready for this option until age eighteen.

Pre-vocational education classes are being offered in all of the junior high/middle schools across the city. Presently these classes are being offered through the exceptional education classes. Plans call for a separate class taught by the school's industrial education teacher and the exceptional education teacher. It is in these schools that Alliance Resource Edition materials are being used in 1979-80.

Program Staff and Participants

Milwaukee staff members having primary involvement with the Alliance and the Alliance Resource Edition materials are as follows:

1. Career Education Coordinator — spends 100 percent of his time working with Milwaukee's career education program. He has had intensive interaction with Alliance project staff members since 1974. He was instrumental in adopting and expanding the use of Alliance career education programs.
2. Coordinator of Exceptional Education and Support Services — spends 100 percent of her time developing and implementing exceptional education programs for Milwaukee. She has interacted a great deal with Alliance project staff members and has worked with the Alliance Career Education Resource Editions since 1978. She is the primary force behind Milwaukee's expansive Exceptional Education Career Education Program.
3. Eight Exceptional Education Junior High/Middle School Teachers — spend 100 percent of their time working in Milwaukee's exceptional education classrooms. These teachers field tested the Resource Editions in 1978-79. Most of these teachers received inservice training before initially beginning the career education programs. Most also gave extensive feedback to Alliance project staff concerning strengths and weaknesses of the materials and personal satisfaction with the programs.
4. Students — approximately 560 junior high/middle school students in Milwaukee's Exceptional Education Program participated in at least one of the Alliance Resource Edition career education programs for the school year 1978-79. These student groups included educable mentally handicapped, emotionally disturbed students, and learning disabled students.

CHAPTER IV

EFFECTS IN ONE SETTING

Interviews conducted with twenty Milwaukee School District administrators, teachers, and students focused primarily on the effects of the Alliance Resource Edition Career Education Programs. The nine primary effects which were defined in the interviews are presented below.

Effects on the School District

Participation in the Alliance had four major effects on the school district.

Provided a core program which assisted in extending the career education program system-wide. Alliance membership allowed the Milwaukee School District access to systematically develop career education materials. These program materials served as the core of their fledgling career education program. Although administrative interest in career education coupled with the city's strong work ethic constituted a fertile environment for the growth of a career education program, "to-use" Alliance materials provided a vehicle for speedy development of Milwaukee's present system-wide career education program. The district's coordinator of career education said, "The Superintendent of Schools was interested in vocational and career education . . .," and "The materials provided something real for the teachers to work with. We would have been hard pressed to develop the core materials at that time."

Facilitated financial support for career education from the school district. The Alliance programs, designed to present a comprehensive career education package, proved a valuable tool in creating and maintaining staff positions. "The Alliance was a vehicle for creating positions for carrying out the Alliance programs. My position (coordinator of career education) began that way." "The materials and their guidelines for use were something tangible to use when bargaining for funds." "They are something to sell" when competing for monies. Also, pilot testing the Alliance materials in Milwaukee "provided real evidence that the materials are useful."

Added credibility to the career education program. The career education coordinator indicated that "bringing in outside talent to support career education lent credibility" when the program was being instituted. Such outside expertise was located for the Milwaukee School District through the Alliance. Milwaukee administrators also perceived the Alliance's association with an institute of higher learning as having inherent benefits. "Association with Ohio State University was a prestige factor."

Helped initiate a career education program for exceptional education students. It seems that the role of the Resource Editions of the Alliance materials in the development of the career education program for exceptional education closely parallels that played by the regular Alliance materials in development of the systemwide career education program. Milwaukee participated in field testing the Alliance Resource Editions of Career Explorations and the Career Planning System during the

school year 1978-79. Milwaukee invested \$6,000 for additional Alliance Resource Edition materials to facilitate the expansion of the program in 1979-80 to include all junior high schools. In addition, a more extensive career education program is underway for exceptional students which centers around a new vocational education center currently serving only exceptional education students. The coordinator of the Exceptional Education and Support Services Program indicated that the Alliance career education programs provided a readily available nucleus for the new Exceptional Education Career Education Program. Also "because it could be used as a budget item," it assisted in securing funds, as did the positive results of field testing the Resource Edition materials. She also reported that her strong working relationship and personal friendship with the career education coordinator facilitated a great transfer of knowledge and concerns and introduced the Alliance materials to the exceptional education program.

Effects on Teachers and Administrators

Participation in the Alliance had three major effects on the teaching and administrative staff.

Increased exceptional education teachers' awareness, knowledge, and commitment to career education. Those exceptional education junior high teachers who in 1978-79 participated in field testing the Resource Editions of the Career Planning System and Career Explorations were provided with a "core" career education program. Many of these teachers had always thought in terms of preparing their students for the world of work, while for others involvement with the Alliance programs introduced a new area of teaching responsibility. The former group of teachers agreed that instructing students with inherent limitations fostered a keen awareness that the classroom should give preparation for finding a productive place in society. For these teachers the Alliance materials represented the first *formal*, comprehensive vehicle for introducing their classes to the world of work. Most looked at the programs with a critical eye, seeing ways to compare, alter, and expand the materials. One teacher noted that "the materials provided a good core to develop from."

Many of the teachers reported that using the Resource Edition materials directed their thinking toward career awareness for the first time, resulting in a variety of new perceptions. One teacher said, "I felt that I was responsible for providing the last of the basic skills so it was a new idea to actually introduce job skills. Now I gear all my teaching toward careers." Another reported, "I am less limiting in my expectations for my students." One teacher who was initially reluctant to teach career education said, "I didn't think the students could do it; I didn't even think I could do it, but the knowledge in the units was very complete."

A number of the teachers reported gaining knowledge about various types of careers and the skills and tools essential to performing various jobs. One teacher reported involvement with the Career Exploration Wilawala (construction) Unit to be a learning experience for her. Although she reported little initial knowledge of construction-related positions, in preparation for teaching the unit she interviewed individuals in the industry and researched procedures for constructing plumbing, heating, and electrical systems. She reported being much more aware and knowledgeable about construction-related trades. "I found out a lot of things I didn't know."

Most teachers, whatever their attitudes going into the programs, reported an increased awareness and knowledge of careers after completion. Most also professed an increased commitment to introducing and emphasizing work-related skills.

Stimulated classroom teacher innovation based on Alliance career education concepts. Milwaukee exceptional education teachers reported a wide range of innovative uses of the Resource Edition career education programs. The career simulations seemed to especially lend themselves to

innovative uses. Various teachers reported pairing the simulations with other units and activities. As an example, students participated in units on measurement and shop safety. The Wilawala simulation came next, followed by an exploratory careers experience with the school's industrial arts teachers. In another classroom, two team teachers introduced Wilawala with an internally developed unit on measurement, and then followed up the simulation by guiding students in actually building a house to scale. The scale model house was complete with carpet, drapes, and wallpaper. The three-dimensional model reportedly made students more aware of design problems and of the skills required to perform specific jobs. Still another teacher presented the convention simulation, followed by a field trip to a hotel allowing students to observe employees actually performing the duties simulated in the unit. Two other teachers unexpectedly obtained clearer views of their students' feelings about their home environment when class members were asked, as part of the Wilawala Unit, to design their own homes. The students' placement of their rooms relative to other family members' rooms and the general design of the houses were quite revealing.

Introduced administrators to pilot/field test procedures. Milwaukee's involvement in the pilot testing and field testing of the various Alliance materials provided a program development model for the district's career education administrator. A sequential pattern is followed in developing all Alliance products. The product's education objectives are clearly identified. The product is developed, then pilot tested on site. Feedback is obtained. The product is revised and then field tested on a larger scale. User feedback is again obtained, and final revisions are made. The systematic and logical development procedures were observed and were transferred to the planning of various inhouse development efforts. "We applied the concepts that we had learned when we developed other facets of the career education program within the district." "This was a learning experience for management."

Effects on Students

Participation in the Alliance had the following major effects on students.

Gave exceptional education students a reality-based awareness of career possibilities in the world of work. Reports from both participating teachers and students pointed toward an expanded student awareness and knowledge of the world of work. "Students became aware of different jobs available in the work world." Involvement with the Alliance programs emphasized to students the reality of their future entry into the work world and the necessity of considering career choices. Some individual students reportedly developed a particular interest in one specific job. Many students were more aware of personal career goals. Interviews with learning disabled student participants revealed that the career planning simulations gave students a "reality-based experience." One student said, "It made us feel like we were doing a real job." For most students, participation provided an enjoyable new experience. Another student said, "They (the materials) weren't bad; they were pretty good." "They got you ready for a job."

Increased exceptional education students' awareness of the work habits/employability skills needed to maintain a job. Teachers reported increased student awareness of the skills needed to gain employment and to remain employed. "Students were made aware of the importance of coming to work on time" and of "how to dress" for work. Also, there was a reported increase in student vocabularies of work-related concepts. Involvement with the career simulations gave students real opportunities to understand the importance of working together to accomplish a task. One teacher observed that during the Wilawala simulation one higher functioning student became the natural group leader from whom other class members sought advice. When this student began having sporadic school attendance her classmates became angry at her for not doing her job and invoked peer pressure for her more regular attendance. In reference to this incident, one student said, "We had to fit the parts together (building a house). If a person wasn't there, we barely got the job done."

CHAPTER V

STRENGTHS AND WEAKNESSES

Strengths

Comprehensive "Package"

The Alliance for Career Education programs can serve as the core of a career education program because they are a comprehensive, ready-to-use package.

"The Alliance was a good vehicle for getting the career education programs started—they provided something real for teachers to work with. We would have been hard pressed to develop the core materials at that time." (career education administrator)

High Quality

"There was good feedback from staff on the quality of the materials. The teachers were enthusiastic about using these materials." (career education administrator)

Systematically Developed

A developmental process is employed when Alliance materials are developed whereby materials are tested on-site, feedback is obtained, and materials are revised. "We learned more about the sequential pattern for developing materials." (career education administrator)

Broad Range of Objectives

"I look at a lot of materials as part of my position (resource teacher); we have twenty-two objectives in career education at Milwaukee. The Ohio State materials were the only ones which included every objective." (resource teacher)

Provided Scarce Materials

Exceptional education teachers indicated that the Resource Edition programs provided much needed career education resource materials "that were not readily available." "My students can't write. There is not much available for lower functioning kids." (exceptional education teacher)

Positive Student Experience

The simulation provided a "reality-based experience" for students. "It made us feel like we were doing a real job."

"We had to fit the parts (building a house) together. If a person was not there, we barely got the job done."

"They got you ready for a job." (learning disabled students)

Weaknesses

Poor Quality of Audio Materials

"The introductory tapes were bad." "The person on the tapes sounded half-dead."

"The kids couldn't understand them." (exceptional education teachers)

Weaknesses in Organization of Materials

"The amount of work was not even for each (student) role. Some were too light and some were too heavy."

"Students needed to try several jobs." (simulations) (exceptional education teachers)

"The convention unit did not give students a feeling of how jobs were interrelated. They didn't realize they were working together." (exceptional education teacher)

Reinforced Unrealistic Student Expectations

"Some jobs need to be emphasized. We should avoid reinforcing unrealistic expectations which students have of themselves."

"Some jobs were inappropriate. Students already have unattainable expectations." (exceptional education teachers)

Reading Level Too High

"The reading level of 2.5 is too high for most educable mentally handicapped students today."

"Don't put too many tough things in books; things you can't find." (exceptional education student)

Lack of Alliance Timeliness

Resource Edition materials were ordered by Milwaukee for 1979-80 and did not arrive until spring. "This caused a loss of credibility" for the Exceptional Education Program.

"Getting pilot test results back was laborious and the results were not back in time for district budget hearings."

"In the real world, our school calendar is August to June." (exceptional education administrator)

Alliance Staff Turnover

"We were constantly meeting new people." "We need a stable program level contact. Brian (project director) was stretched in inappropriate ways. He was really good, but he was our only consistent contact." (career education administrator)

Difficulty Reproducing Materials on a Large Scale

"The Alliance materials were presented as being cost effective. Camera-ready copies were provided. The cost of reproducing the consumable materials on a large scale were in fact prohibitive." (career education administrator)

The Milwaukee administrator had expected the Alliance to have provisions for a timely, low-cost reproduction of the Resource Edition materials when they decided to use them systemwide.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Distribution

Alliance materials' distribution is limited to member school districts. Beginning with the school year 1973, the Alliance has been operational for seven years in a total of thirteen school districts in ten states. Alliance-developed career/vocational education materials have been used by 31,500 students involving 893 teachers and counselors in 843 classrooms. Two of the four Alliance career education programs have been adapted for use with bilingual and educable mentally handicapped students (Resource Editions). A total of 2,720 students have used the Resource Edition programs for the educable mentally handicapped in 145 classrooms with 145 teachers. During the school year 1978-79, these Resource Editions were used by the Milwaukee Public School District, the case study site, in eight junior high schools and middle schools with 560 educable mentally handicapped, learning disabled, and emotionally disturbed students. In the school year 1979-80 there will be an expanded use of the materials in all eighteen Milwaukee junior high/middle schools.

Use

The Milwaukee Public School District has had extensive involvement with the Alliance since its beginning in 1973-74. With a student population of 91,943, the district employs 6,000 teachers and administrators. During the school year 1978-79, Milwaukee Exceptional Education Program was involved in field testing the Alliance's Resource Edition career education materials for the educable mentally handicapped. The materials were used in five classrooms of educable mentally handicapped students, two classrooms of learning disabled students, and one classroom of emotionally disturbed students. Milwaukee's Exceptional Education Program is a strong one, serving 5,700 students with 670 exceptional education teachers. Although Milwaukee had a systemwide career education program, the field testing of the Alliance Resource Edition career education Programs represented the formal beginnings of an Exceptional Education Career Education Program. During the 1979-80 school year, use of the Alliance Resource Edition programs was expanded to include all of the district's eighteen junior high/middle schools.

During 1979-80 a new vocational education center was opened which currently serves only exceptional education junior high and high school students.

Effects

Use of Alliance Career Education materials and participation in the Alliance by the Milwaukee Public School District were determined to have the following effects: (1) provided a core program that assisted in extending the career education program systemwide; (2) facilitated financial support

for career education from the school district including the creation of one permanent position; (3) added credibility to the career education program by providing materials from a respected university; and (4) helped initiate a career education program for exceptional education students.

Alliance participation had the following effects on the teaching and administrative staff: (1) increased exceptional education teachers' awareness, knowledge, and commitment to career education; (2) stimulated classroom teacher innovation based on Alliance career education concepts; and (3) introduced administrators to pilot/field test procedures.

Alliance participation had the following student effects: (1) gave exceptional education students a reality-based awareness of career possibilities in the world of work, and (2) increased exceptional education students' awareness of the work habits/employability skills needed to maintain a job.

Appraisal

Administrators at the Milwaukee site reported the Alliance materials to be a valuable core career education program "package." The Resource Edition materials were similarly deemed valuable as a core exceptional education career education program. As a positive feature, Milwaukee users further cited the high quality, systematic development, and broad range of career education objectives of the materials. They indicated that the Resource Editions answered a pressing curriculum need and provided a positive, reality-based learning experience to students. Users cited as negative the poor quality of the video materials, various organizational weaknesses of the materials, lack of Alliance timeliness in delivering materials, turnover of the Alliance program staff, and monetary constraints of reproducing the materials on a large scale. Some teachers viewed negatively the introduction of careers requiring high skill levels to lower functioning students. The 2.5 reading level was reportedly too high for many students.

Conclusions

1. The Alliance Career Education Programs constitute a core for career education programs that can facilitate a school district's development of more expansive career education programs. This was evident through the development of Milwaukee's Exceptional Education Career Education Program.

2. The Alliance Resource Edition Career Education Programs can also serve the same facilitating function mentioned above for development of a districtwide Exceptional Education Career Education Program as evidenced in Milwaukee. There seems to be a special need for development of career education materials for the educable mentally handicapped.

3. Systematic research and developmental procedures developed by a research and development center can provide a valuable model for local school districts.

4. Exceptional education teachers can develop an expanded awareness, knowledge, and commitment to career education through use of the Alliance Resource Edition Career Education Programs. This involvement can have particularly significant impact on teachers who previously did not see career education as a teaching responsibility.

5. The Alliance Resource Edition Career Education materials can offer "reality-based" experiences to students which introduce them to the world of work and set the stage for exploring and selecting a career.

6. The Alliance Resource Edition Programs can increase students' awareness of the employability skills needed to maintain a job.

7. There is an inherent problem in determining the appropriate reading level for materials designed for use with the mentally handicapped. At the junior high level lower functioning students had difficulty reading the materials developed at a 2.5 reading level. This created frustration and lessened the students' interest in the materials. Curriculum developers indicate that it is very difficult, however, to develop materials geared to the needs of junior high students below the 2.5 reading level and still maintain adequate content.

8. It is vital that an R&D institution be involved in curriculum and program development with a local school district be aware of the pragmatic concerns of the local districts. Specifically, a research institution must coordinate the institution of development efforts with the school year beginning in August and ending in June. Teacher inservice, deliveries, and initial program implementation must logically take place at the beginning of the school year. Data needed for the securement of funds must be available before the beginning of the "school year."

9. The issue of how developed materials can be cost effectively reproduced in quantity is an important consideration for an R&D organization involved in developing curriculum materials for local school districts (through a consortium such as the Alliance) since a district could decide on extensive districtwide program implementation as Milwaukee did in the case study.

10. There are conflicting views regarding the value of presenting career options requiring high skill levels to mentally handicapped students. It would appear discriminatory and limiting to introduce these students only to careers requiring less sophisticated skills. A number of Milwaukee exceptional education teachers insisted, however, that many of the careers presented by the Alliance materials were unattainable by their students and served only to reinforce unrealistic student expectations.

Recommendations

Recommendations to the National Center

1. Due to a continuing need for career/vocational education materials specifically designed for use with the educable mentally handicapped, it is recommended that the Alliance consider further adaptations of career education materials.

2. It is recommended that the problem of maintaining content in materials designed for mentally handicapped students who may be reading below the 2.5 grade level be presented to administrators and teachers before they attempt to use the Resource Edition programs. This will promote realistic expectations of the materials and offer an opportunity to discuss innovative adaptation: of the materials that might be appropriate for use with lower functioning students.

3. When materials are being pilot/field tested in a local school district, it is recommended that attention be given to maintaining constant National Center program assistant level contacts. This will give the school district a sense of continuity.

4. It is recommended that the issue of large-scale production of Alliance materials be discussed with a school district during the "marketing phase." The National Center should determine whether it can be responsible for large-scale reproduction of materials. If the mass reproduction of materials is deemed by the National Center to be an inappropriate research and development activity, then this stance should be emphasized to member districts initially and viable opinions for such reproduction presented.

5. It is recommended that the National Center Alliance staff discuss the rationale for presenting a full range of career options to the mentally handicapped (i.e., the creating of unrealistic expectations vs. limiting horizons issue) with teachers before the materials are used. This strategy would acknowledge the issue, outline the Alliance's position, and allow teachers to consider the issue before teaching the programs.

6. It is recommended that any undertakings involving interaction between the National Center and a local school district be planned to accommodate the local district's "school year" calendar. Milwaukee emphatically emphasized this pragmatic concern. Underestimating the necessity of this type of planning is sure to result in frustration to the local school district and loss of credibility for the National Center.

Recommendations to Users

1. It is recommended that the Alliance Resource Editions be presented to teachers during inservice training as a basic curriculum core. It should be emphasized from the beginning that teachers should review the programs and make adaptations or innovations which fit individual classes and their teaching styles. This will reduce confusion and foster realistic expectations of the materials.

2. It is recommended that teacher inservice introducing career education materials include directions of how teachers might acquaint themselves with specific job areas and secure supplementary materials. Although most exceptional education teachers in Milwaukee received inservice training before field testing the Resource Editions, the teachers interviewed stressed the need for more direction in preparing to use the materials. Since many of the teachers viewed the various job clusters as "uncharted ground," they reported needing a basic introduction to the various job areas and related skills.

APPENDIX A
LIST OF RESOURCE MATERIALS REVIEWED

1. From Salinas to New York City: Case Studies in Career Education
or
An Analysis of the Transportability of Career Education Programs in the Alliance for Career and Vocational Education
by
Dr. Brian Fitch
Senior Research and Development Specialist
National Center for Research in Vocational Education
The Ohio State University
2. The Alliance for Career and Vocational Education (Proposal)
by
Dr. Brian Fitch
Senior Specialist and Program Director
The National Center for Research in Vocational Education
The Ohio State University
3. Career Planning System (Resource Edition)
Alliance for Career and Vocational Education
National Center for Research in Vocational Education
4. Career Exploration Programs (Resource Editions)
"Conventions"
"Shirttails"
"Wilawala Lake Community"
Alliance for Career and Vocational Education
National Center for Research in Vocational Education